

--7. (Amended) The tuner apparatus according to claim 4, further comprising an input bandpass filter disposed after said satellite TV broadcasting receiver or after said CATV broadcasting receiver.

--8. (Amended) The tuner apparatus according to claim 4, wherein, when said tuner apparatus receives said satellite TV broadcasting, said intermediate-frequency signals obtained by receiving said satellite TV broadcasting are supplied through said mixer circuit to said quadrature detector circuit and said mixer circuit operates as said first intermediate-frequency amplifier.--

REMARKS

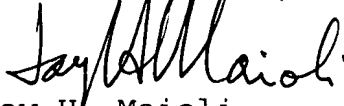
Claims 1-8 remain in the application and have been amended hereby.

As will be noted from the Declaration, Applicants are citizens and residents of Japan and this application originated there.

Accordingly, the amendments to the specification are made to place the application in idiomatic English, and the claims are amended to place them in better condition for examination.

An early and favorable examination on the merits is earnestly solicited.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT OF THE DISCLOSURE

The Abstract of the Disclosure has been amended as follows:

--The present invention provides a tuner apparatus operating as a common tuner capable of receiving both satellite digital TV and terrestrial TV broadcasting. A tuner configured, according to the invention operates as follows. As [it] the tuner apparatus receives satellite TV broadcasting, intermediate-frequency signals SIF1 are supplied to its quadrature detector circuit where the SIF1 signals are demodulated into baseband signals SI and SQ by using oscillation signals supplied thereto from its oscillator. As [it] the tuner apparatus receives terrestrial TV or CATV broadcasting, terrestrial TV or CATV broadcast wave signals are supplied to its mixer circuit where these signals are frequency-converted into intermediate-frequency signals SIF1 that fall within the bandwidth of the satellite TV broadcasting SIF1 signals. The first intermediate-frequency signals SIF1 are supplied to the quadrature detector circuit where the SIF1 signals are frequency-converted into second SIF2 signals by using oscillation signals supplied thereto from the oscillator.--

IN THE CLAIMS

Claims 1-8 have been amended as follows:

--1. (Amended) [Tuner] A tuner apparatus comprising:

a mixer circuit for frequency-converting terrestrial TV broadcast or CATV broadcast wave signals supplied from a terrestrial TV broadcasting receiver or CATV broadcasting receiver into [those to fall] signals within [the] a bandwidth of intermediate-frequency signals of satellite TV broadcasting supplied from a satellite TV broadcasting receiver and outputting first intermediate-frequency signals;

a quadrature detector circuit to which said satellite TV broadcasting intermediate-frequency signals and said first intermediate-frequency signals are inputted; and

an oscillator circuit for supplying oscillation signals to said quadrature detector circuit[;]_

wherein when [the] said tuner apparatus receives satellite TV broadcasting, said oscillator circuit supplies oscillation signals in a predetermined frequency band and of a predetermined frequency band and of a predetermined phase to said quadrature detector circuit where said satellite TV broadcasting intermediate-frequency signals supplied thereto are demodulated into baseband signals by using said oscillation signals[;]_ and

wherein when [the] said tuner apparatus receives terrestrial TV broadcasting or CATV broadcasting, said oscillator circuit supplies oscillation signals in a

predetermined frequency band to said quadrature detector circuit where said first intermediate-frequency signals supplied thereto are frequency-converted into second intermediate-frequency signals by using said oscillation signals.

--2. (Amended) The tuner apparatus according to claim 1, further [including] comprising a first intermediate-frequency amplifier disposed between said satellite TV broadcasting receiver and said quadrature detector circuit.

--3. (Amended) The tuner apparatus according to claim 1, wherein when [the] said tuner apparatus receives said satellite TV broadcasting, said intermediate-frequency signals obtained by receiving the satellite TV broadcasting are supplied through said mixer circuit to said quadrature detector circuit and said mixer circuit operates as said first intermediate-frequency amplifier.

--4. (Amended) A tuner apparatus comprising:
a satellite TV broadcasting receiver for receiving satellite TV broadcasting wave signals and outputting satellite TV broadcasting intermediate-frequency signals;
a terrestrial TV broadcasting receiver or CATV broadcasting receiver for receiving terrestrial TV broadcast or CATV broadcast wave signals[.];
a mixer circuit for frequency-converting said terrestrial

TV broadcast or CATV broadcast wave signals into [those to fall] signals within the bandwidth of said satellite TV broadcasting intermediate-frequency signals by using first oscillation signals in a predetermined frequency band and outputting first intermediate-frequency signals[.];

a quadrature detector circuit to which said satellite TV broadcasting intermediate-frequency signals and said first intermediate-frequency signals are inputted;

a first oscillator circuit for supplying said first oscillation signals to said mixer circuit; and

a second oscillator circuit for supplying second oscillation signals to said quadrature detector circuit[;];

wherein when [the] said tuner apparatus receives satellite TV broadcasting, said second oscillator circuit supplies said second oscillation signals in a predetermined frequency band and of a predetermined phase to said quadrature detector circuit where said satellite TV broadcasting intermediate-frequency signals supplied thereto are demodulated into baseband signals by using said second oscillation signals; and

wherein when [the] said tuner apparatus receives terrestrial TV broadcasting or CATV broadcasting, said second oscillator circuit supplies said second oscillation signals in a predetermined frequency band to said quadrature detector circuit where said first intermediate-frequency signals supplied thereto are frequency-converted into second intermediate-frequency signals by using said second

oscillation signals.

--5. (Amended) The tuner apparatus according to claim 4, further [including] comprising a first intermediate-frequency amplifier disposed between said satellite TV broadcasting receiver and said quadrature detector circuit.

--6. (Amended) The tuner apparatus according to claim 4, further [including] comprising a first intermediate-frequency filter disposed between said satellite TV broadcasting receiver and said quadrature detector circuit or between said mixer circuit and said quadrature detector circuit.

--7. (Amended) The tuner apparatus according to claim 4, further [including] comprising an input bandpass filter disposed [behind] after said satellite TV broadcasting receiver or after said CATV broadcasting receiver.

--8. (Amended) The tuner apparatus according to claim 4, wherein, when [the] said tuner apparatus receives said satellite TV broadcasting, said intermediate-frequency signals obtained by receiving [the] said satellite TV broadcasting are supplied through said mixer circuit to said quadrature detector circuit and said mixer circuit operates as said first intermediate-frequency amplifier.--